

# Unit Planning Guide: Grade \_\_\_\_7 Unit 6\_\_\_\_ of \_\_\_\_7

Unit Title: Probability	Pacing (Duration of Unit):
Grade:7	Buffer Day(s):

## Desired Results

### Transfer Goals

*Students will be able to independently use their learning to:*

- **Make sense of problems and persevere in solving them.**
- **Reason abstractly and quantitatively.**
- **Construct viable arguments and critique the reasoning of others.**
- **Model with mathematics.**
- Use appropriate tools strategically.
- Attend to precision.
  - Look for and make use of structure.
  - Look for and express regularity in repeated reasoning.

### Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)

<p><b>Standards (Priority Standards in bold):</b></p> <p><b>Investigate chance processes and develop, use and evaluate probability models</b></p> <p>7.SFP.5: Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around <math>\frac{1}{2}</math> indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.</p> <p>7.SP.6: Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.</p> <p><b>7.SP.8: Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.</b></p> <p>7.SP.8a: Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.</p> <p>7.SP.8b: Represent sample spaces for compound events using methods such as organized lists, tables, and tree diagrams. For an event described in everyday language</p> <p>7.SP.8c: Design and use a simulation to generate frequencies for compound events.</p>	<p><b>WIDA for English Language Learners</b></p> <p>Standard 1: ELLs <b>communicate</b> for <b>Social</b> and <b>Instructional</b> purposes within the school setting</p> <p>Standard 3: ELLs <b>communicate</b> information, ideas and concepts necessary for academic success in the content area of <b>Mathematics</b></p> <p>In the lesson planning stage, teachers will need to differentiate lessons for ELLs. In order to accomplish this they will need: 1.) this curriculum map, 2.) a list of their ELLs and their proficiency levels, and 3.) appropriate language function expectations and scaffolds or supports.</p>
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<p align="center"><b>Meaning (*Mostly assessed through Performance Tasks/Assessments)</b></p>
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<p><b>Big Ideas:</b> (Statements and concepts written in teacher friendly language which reflect the important [but not obvious] generalizations we want students to be able to arrive at. These are used by the teacher to focus daily instruction.)</p> <ul style="list-style-type: none"> <li>• Probability of an event is a number between 0 and 1 and probability near 1 indicates a more likely event</li> <li>• The probability of compound events can be determined by creating organized lists, tree diagrams and designing stimulations to generate frequencies of an event</li> </ul>	<p><b>Essential Questions:</b> (Questions which frame ongoing and important inquiries about the big ideas. They are written for students and used in daily instruction to help engage students in meaningful thinking.)</p> <ul style="list-style-type: none"> <li>• How can data and probability be used to predict the outcome of future events?</li> <li>• How can we make predictions using probability models?</li> </ul>
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**Acquisition (\*Mostly assessed through traditional summative assessments)**

**Knowledge:** Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.

*Students will know ...*

- Probability of an event is between zero and one
- Approximations of probabilities of different events
- Probability of compound events

**Key Academic Vocabulary:**

**Probability, probability model**

**Relative Frequency**

**Event**

**Skills:** The discrete skills and process students should be able to use independently (Bloom's Level of Learning should be noted in parentheses.)

*Students will be skilled at:*

- Determining the probability of an event
- Approximating the probability of a long-run event
- Predicting relative frequency given the probability
- Develop organized lists, tree diagrams, tables, and simulations to evaluate probabilities
- Analyze and interpret probability models to find possible outcomes, likelihood and frequency of an event